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The Coalition To Protect America's National Parks

Voices of Experience

ELECTRONIC SUBMISSION – NO HARD COPY TO FOLLOW

July 21, 2017

Ester McCollough, Field Office Manager
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Subject: Comments on Environmental Assessment DOI-BLM-UT-GO10-2017-0028-EA
for the December 2017 Competitive Oil and Gas Lease Sale

Dear Ms. McCollough:

I am writing to you on behalf of over 1,300 members of the Coalition to Protect America's National Parks (Coalition). Our membership is composed entirely of retired, former, or current salaried employees of the National Park Service (NPS). As a group, we collectively represent more than 30,000 years of national park management experience. The Coalition studies, educates, speaks, and acts for the preservation of America's National Park System.

We count among our membership former NPS employees of Dinosaur National Monument who, like us, are quite concerned about the proposed December 2017 Competitive Oil and Gas Lease Sale by the Bureau of Land Management (BLM) Green River District, Vernal Field Office in Duchesne and Uintah Counties, Utah. We hereby submit comments on the preliminary environmental assessment (EA) for the proposed sale.

OVERVIEW OF PROPOSED ACTION

The BLM has prepared a preliminary EA to disclose and analyze the environmental consequences of the leasing of 64 parcels during the December 2017 oil and gas lease sale. These parcels, comprising 66,625.93 acres within the Vernal Field Office (VFO), were nominated for the December 2017 Competitive Oil and Gas Lease Sale. They were determined to be available to be leased for oil and gas development under the VFO's October 2008 Resources Management Plan (RMP). The EA appears to be tiered off the 2008 RMP.

According to BLM, the following parcels considered in the EA are wholly or partially located within the "intended Vernal Master Leasing Plan (MLP) area": 58, 59, 63, 65, 66, 67, 69, 70, 72, 80, 81, 82, 83, 84, 85, 86, and 87. Rather than deferring nominated parcels in intended MLP areas, BLM states that parcels received as expressions of interest were forwarded to the field office to conduct appropriate environmental analysis to ensure environmentally responsible leasing of oil and gas resources on federal lands. Evaluation of the parcels will be based on the governing land use plans and site specific National Environmental Policy Act (NEPA) analysis. If it is determined through this EA that current lease stipulations do not provide adequate protection of other resources, the Federal Land Policy and Management Act (FLPMA) provides BLM with the authority to defer leasing of specific parcels until appropriate plan amendment(s) can be completed to provide additional protective stipulations or to close the area for leasing.

According to EA Section 3.3.9 Visual Resources (p. 31-32), six parcels proposed for leasing are within the viewshed of Dinosaur National Monument (DNM) and the Quarry Visitor Center (DNM's most heavily visited site). These parcels are:

- Parcel 69 – located approximately 3 miles west and directly adjacent to the border of the DNM and Visitor Center. Access to this parcel would likely be from the north or south.
- Parcel 70 – located within 0.5 mile south of DNM (and approximately 2 miles south of the Visitor Center) on the opposite side of the Green River. This parcel is private surface. Access to this parcel will likely occur from the south. The parcel is fully visible from DNM;
- Parcel 71 – located within 0.25 mile of the main road that accesses DNM (approximately 5 miles southwest Visitor Center), and within 1 mile and southeast of DNM. This parcel is a mix of public and private land. Access to this parcel may occur from the north, south or east. Most of parcel 71 is located up on a ridge; and
- Parcels 65, 67, 72 – located within line-of-sight between 18 and 28 miles southwest of the DNM.

As a national parks advocacy group, the Coalition will focus its comments on these six parcels and the potential impacts of their proposed leasing on the resources and visitor experience opportunities within DNM.

GENERAL COMMENTS

In general, there are a number of shortcomings in the environmental analysis related to the six parcels adjacent to or visible from DNM. These shortcomings include:

1) BLM Fails to Consider Statutory Requirements for Protection of DNM Resources and Values – The EA peripherally mentions the Federal Land Policy and Management Act of 1976 (the Act) as the authority under which BLM is to plan for and manage “public lands.” While the Act directs BLM to manage those lands “on the basis of multiple use and sustained yield unless otherwise specified by law” (43 USC § 1701(a)(7)), in essence authorizing resource extraction activities such as oil and gas development, the EA fails to provide the full context of the Act relative to the priority it gives to the protection of the resources and values on public lands. Section 1701(a)(8) of the Act states:

“the public lands be managed in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archeological values; that, where appropriate, will preserve and protect certain public lands in their natural condition; that will provide food and habitat for fish and wildlife and domestic animals; and that will provide for outdoor recreation and human occupancy and use.”

In contrast to the BLM's “multiple use mandate,” the NPS-managed resources within DNM are protected under a separate statutory requirement, which is the “conservation mandate” of the NPS Organic Act of 1916. The Organic Act established the fundamental purpose of units of the National Park System, which is

“to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations” (54 USC § 100101(a))

Courts have consistently interpreted the Organic Act as giving conservation priority over use such that “when there is a conflict between conserving resources and values and providing for enjoyment of them, conservation is to be predominant” (NPS Management Policies 2006 §1.4.3).

DNM was originally designated by Presidential proclamation in 1915 to preserve its world-renowned Jurassic dinosaur fossils, and then expanded in 1938. Based on the 1915 and 1938 proclamations, the purpose of DNM

is to provide for protection and visitor enjoyment of the outstanding fossil resources and the scenic canyon areas of the Green and Yampa Rivers.

The geologic and paleontological resources in DNM showcase millions of years of natural processes and associated plant and animal life. These resources are displayed at the Quarry Exhibit Hall located in the southwestern portion of the monument not far from the Quarry Visitor Center. This area is the most heavily visited location in DNM, receiving hundreds of thousands of visitors annually. In addition, the Monument contains exceptional biological diversity and species abundance. Over 1,000 native plants and animal species are found within the six major vegetation communities located in the Monument. DNM also contains 46 miles of the lower Yampa River, the last remaining free-flowing large river in the Colorado River System; the regulated Green River below the Flaming Gorge Dam; and a 'hybrid' river below the confluence of both rivers.

Because the NPS Organic Act mandates that the conservation of park resources take precedence over use, we believe that BLM should fully evaluate and minimize, to the extent practicable, the likely impacts to DNM resources and values that could foreseeably be caused by the proposed oil and gas leasing and future development. The resources and values at risk include air quality, water quality, visual resources including night skies, and soundscapes. As discussed below, we believe that both the 2008 VFO RMP and the current EA fail to adequately consider, evaluate, or address these concerns.

2) The 2008 RMP provided no specific analysis of potential impacts of mineral development on DNM resources and values – The EA is tiered off the 2008 RMP and environmental impact statement (EIS). While the RMP covers many different impact topics, there is no meaningful discussion or analysis of obvious potential adverse impacts of mineral development activities near the monument boundary, including the proposed leasing. Given this lack of analysis in the RMP, one would reasonably expect BLM to provide a more meaningful analysis of potential impacts in the EA; however, such is not the case.

3) The EA fails to provide a meaningful analysis of potential impacts of the proposed leasing on DNM resources and values – According to Section 1.5.1 (pp. 6-7), external scoping was conducted by sending notification of the proposed sale to affected landowners, including the NPS. The NPS did, in fact, comment and expressed concerns about impacts to air quality, view-sheds, night skies, and soundscapes at the Monument. Concerns were also expressed about impacts to water quality in Brush Creek with corresponding threats to T&E fish. The EA indicates that the NPS concerns were addressed “either by analysis in the EA in the corresponding resource section, or in the case of impacts to night skies and soundscape in the monument by adding a stipulation to the parcels requiring mitigation of impacts at the time of development.” BLM’s approach to addressing NPS concerns seems superficial at best, lacking meaningful explanation or analysis, and fails to consider the standard range of options for preventing or minimizing adverse impacts to special resource areas, such as DNM, which should include “avoidance.”

While it appears to be common practice for BLM to put off a detailed site analysis of potential impacts of oil and gas operations until after an Application for Permit to Drill (APD) is filed, this approach is problematic when applied to specially protected resource areas such as DNM. Once a lease is issued, an expectation is established that the lessee will be able to develop the site. At that point, “avoidance” of impacts is no longer an option, leaving only a lesser range of measures to “reduce” impacts. Rather than defer an impact analysis until later, as BLM is doing in this case, we believe that a more appropriate approach would be for BLM to fully analyze the relative benefits vs. impacts of developing individual parcels, including the three near DNM, to determine if leasing is the highest and best use of the parcel. For more on this, see comment # 5 below.

4) The proposed leasing of parcels within the “intended Vernal MLP area” is inconsistent with past precedent – As stated previously, page 9 of the EA indicates that parcels 58, 59, 63, 65, 66, 67, 69, 70, 72, 80, 81, 82, 83, 84, 85, 86, and 87 are located wholly or partially within the “intended Vernal Master Leasing Plan (MLP) area.” However, rather than deferring these parcels until the MLP is completed, which would be prudent, BLM has decided to propose these parcels for lease since apparently BLM received expressions of

interest in them. This decision is inconsistent with past precedent set by the Utah State Office (USO) in deferring parcels or acreage from the lease sale because they were either entirely or partially within the boundaries of areas designated for in-depth analysis as part of the proposed Vernal MLP. For example, such deferrals occurred in the February 2016 Oil and Gas Lease Sale for VFO Parcels. See April 2016 Finding of No Significant Impacts (FONSI)¹.

5) The status and relevance of the Vernal Master Leasing Plan (MLP) is unclear – The EA (p. 5) indicates that parcels 65, 67, 69, 70, and 72 are among 17 parcels located within the “intended Vernal MLP area,” while parcel 71 is not within the MLP area. This is about the only mention of the Vernal MLP in the document. The EA also indicates that rather than deferring nominated parcels in intended MLP areas (which BLM has apparently done in the past), parcels received as expressions of interest were forwarded to the field office to conduct appropriate environmental analysis to ensure environmentally responsible leasing of oil and gas resources on federal lands. Evaluation of the parcels will be based on the governing land use plans and site specific NEPA analysis. If it is determined through this EA that current lease stipulations do not provide adequate protection of other resources, FLPMA provides the authority to defer leasing of specific parcels until appropriate plan amendment(s).

Despite this explanation, the EA falls far short of the level of collaborative, stakeholder-inclusive landscape-scale planning process employed by BLM in other locations in Utah and in the area managed by BLM Colorado (White River Field Office) that is adjacent to the eastern portion of DNM. For example, the Moab Field Office prepared an MLP that is widely considered as a model of effective collaborative planning. As described in the 2016 Record of Decision², the NPS along with Grand County, San Juan County, and the State of Utah were involved as cooperating agencies throughout the planning process. The plan included a number of specific provisions to ensure the protection of park resources within Arches and Canyonlands National Parks. These measures included: close the immediate viewshed from Arches National Park to mineral leasing; close the VRM Class II areas on the northern boundary of Canyonlands National Park to mineral leasing; apply an NSO stipulation to the viewshed from the northern boundary of Canyonlands National Park that is outside the VRM Class II area; close BLM lands to mineral leasing along the entire eastern boundary of Canyonlands National Park for a distance of 3-miles to protect the foreground viewshed from the Park boundary; apply an NSO stipulation to areas located within 2.5 miles (based on noise modeling) of National Park boundaries in order to reduce auditory impacts from mineral operations to backcountry portions of Arches and Canyonlands National Parks; and apply a CSU stipulation within 6.1 miles (9,800 meters) of National Parks that requires noise mitigation efforts to be implemented with a maximum level of 55 decibels for production, measured at 350 feet from the source). This sound level could be achieved by replacement diesel engine exhaust silencers (mufflers), noise barriers, and other noise control measures.

Similarly, BLM Colorado’s White River RMP Amendment included the Dinosaur Trail MLP, which gives special consideration to the protection of resources and scenic qualities along the Colorado side of DNM. According to 2015 Record of Decision³, oil and gas leasing within the MLP area would progress in phases to address resource values and concerns. Leasing would first occur in the southern portion of the MLP, where the oil and gas occurrence potential is rated medium to high. Leasing within sage-grouse habitat, areas of low oil and gas potential, or areas adjacent to DNM would occur only after the BLM has completed additional analysis and planning. For example, in areas of the MLP that are outside of sage-grouse habitat but are adjacent to DNM Headquarters (*emphasis added*), leasing would only occur after the BLM has completed a RMP Revision (i.e., an EIS) and determined whether or not leasing is appropriate after considering the potential impacts to visual resources, night skies, and soundscapes.

¹https://eplanning.blm.gov/epl-front-office/projects/nepa/55342/72744/79817/Vernal_FONSI_Feb16_Sale_041516.pdf

²https://eplanning.blm.gov/epl-front-office/projects/lup/68430/94904/114786/05_Moab_MLP_ROD_Approved_Resource_Management_Plan_Amendments_508.pdf

³https://eplanning.blm.gov/epl-front-office/projects/lup/65266/79043/91308/2015_Oil_and_Gas_Development_RMPA_ROD.pdf

Given the level of care that these other BLM Field Offices have given to the protection of resources within units of the National Park System adjacent to proposed lease parcels, it is especially troubling that the Vernal Field Office takes a much less cautious approach in its current proposal. In contrast to the plans cited above, the EA (and the 2008 RMP it is tiered off of) provides a relative lack of comprehensive site planning, does not involve the NPS as a cooperating agency, and fails to adequately consider or mitigate the likely adverse impacts to park resources and visitor experience opportunities if mineral development were to proceed near the DNM boundary. “The intended Vernal Master Leasing Plan” is barely mentioned in the EA, which provides negligible reference to and gives little consideration to the protection of natural and cultural resources and scenic qualities within DNM. As a result, the status of the MLP planning process is unclear – will it be completed or not? There is inadequate explanation in the EA why BLM previously pre-emptively deferred on leasing parcels within the “intended MLP area” but has not done so in this case. And, in general, the analysis fails to take a hard look, as required under NEPA, at foreseeable adverse impacts to DNM resources.

Regardless of whether the Vernal MLP is completed or not, we are convinced that the area around DNM, “the intended Vernal MLP area,” would benefit from a more comprehensive and collaborative land use planning process similar in substance and multiple stakeholder involvement as the Moab or White River plans. In the absence of such a plan, it is alarming that BLM Utah proposes to lease the three parcels immediately adjacent to DNM in close proximity to the Quarry Visitor Center and Quarry Exhibit Hall, the most heavily visited locations in DNM.

We object to the proposal and contend that the resources and visitor experience opportunities on the Utah side of DNM deserve the same level of care and consideration provided by BLM on the Colorado side under the Dinosaur Trail MLP. We urge BLM to defer leasing parcels 69, 70, and 71 until a more comprehensive plan, such as an RMP amendment and EIS, is prepared. In contrast to these parcels of concern, because of the distances involved, we believe that potential adverse impacts to DNM resources from oil and gas development of parcels 65, 67, and 72 can be adequately minimized through the use of appropriate stipulations and by requiring (i.e., not as a recommended or voluntary measure) that operators use the BLM-prescribed best management practices (BMPs) to minimize impacts.

6) The EA fails to provide a meaningful cost/benefit analysis or evaluate potential socioeconomic impacts of the proposed action – There is no socioeconomic impact analysis in the EA (it is not an impact topic carried forward, etc.). Despite the lack of discussion or analysis, Appendix E briefly concludes, “No impacts to the social or economic status of the counties or nearby communities would occur from the leasing of these parcels due to the small size of this project in relation to ongoing development throughout the Uinta Basin.” Drawing such a conclusion without providing supporting information or analysis violates the purpose and information requirements of NEPA as set forth in the CEQ Regulations, 40 CFR Parts 1500-1508⁴. We believe BLM’s conclusion is not valid, particularly in regard to parcels 69-71; and, clearly, BLM has not adequately explained or supported its conclusion.

Furthermore, while the 2008 RMP (section 4.14.2.3) provided a general discussion of potential socioeconomic impacts of mineral development, it is dated and there is no discussion or specificity in the RMP regarding potential adverse impacts to the local recreation/tourism economy, including the portion of that economy driven by visitation to DNM, if parcel(s) immediately adjacent to the Monument were to be leased and developed, as is proposed in the EA.

A significant concern is that BLM has not analyzed or weighed the relative benefits vs. the adverse impacts of leasing in deciding which parcels to propose for sale. In fact, based on maps provided with the EA, the economic benefit of leasing parcels 69, 70, and 71 is highly questionable compared to the potential adverse impacts to DNM resources and visitor experience opportunities. Specifically, the EPCA (Energy Conservation and Policy Act) Total Oil Density and Total Gas Density Maps indicate that parcels 69, 70, and 71 are located

⁴https://energy.gov/sites/prod/files/NEPA-40CFR1500_1508.pdf

in the lowest density (i.e., the least productive) areas for both oil and gas production, meaning the likelihood of beneficial production of oil and gas on these parcels is relatively low. On the other hand, the parcels are located directly within the viewshed of DNM's Quarry Visitor Center where the probability of adverse impacts is highest.

As a result, the proposed leasing and development of these parcels is indefensible from an economic cost-benefit perspective. The potential economic value and job creation of developing oil and gas operations on these "low density" parcels is insignificant compared to the economic benefits already being generated by park visitor spending at DNM. In 2016 DNM attracted over 304,000 visitors, which resulted in \$18.1 million in visitor spending, establishment of 244 jobs, and an outcome of \$20.5 million in total economic output in the local communities. If BLM believes leasing parcels 69-71 is justified from a cost-benefit perspective, then it needs to do a much better job of explaining and justifying its point of view.

SPECIFIC COMMENTS ABOUT THE EA

Section 1.4.1 Conformance with Plans of Other Agencies – This section mentions that parcels 69-71 are adjacent to DNM but does not discuss whether the proposed leasing actually conforms to the 1986 DNM General Management Plan/Development Concept Plan/Land Protection Plan (Monument plan). In that plan, NPS clearly expresses concerns about the potential adverse impacts of oil and gas operations. These concerns include: "Oil and gas development within the monument ...is unacceptable within the boundaries of the monument because of the impact of such activities upon scenic, natural, and cultural resources, and the visitor experience" (p. 107); and "activities outside the monument [that] affect or potentially affect natural and scenic resources within the boundary [include] oil and gas exploration and extraction adjacent to monument boundary, resulting in noise, visual impacts, ground disturbance, [and] water pollution." (pp. 108-109).

In essence, the proposed leasing of parcels immediately adjacent to the DNM boundary and others that are visible from the Quarry Visitor Center is clearly in conflict with purpose and management objectives of DNM.

Section 1.6 Relationship to Statutes, Regulations, Policies or Other Plans –The EA fails to mention the NPS Organic Act, which provides the statutory requirements for the protection of resources and values located within DNM adjacent to parcels 69-71. As stated in the previous comment, the EA also fails to mention or conform to DNM's General Management Plan, which establishes management objectives for the Monument, including for the protection of park resources and values.

Chapter 2 Description of Alternatives – Given that the EA offers only the alternatives of leasing (proposed action) or not leasing (no action) ALL parcels, the EA fails to provide a range of reasonable alternatives as required under NEPA. It is notable that Section 2.4 (*Alternatives Considered but Not Analyzed in Detail*) states, "No other alternatives to the Proposed Action were identified that would meet the purpose and need of the Proposed Action." Such a simplistic "all or nothing" approach, taken without considering or analyzing whether some parcels merit a more cautious approach than others, reinforces the inadequacy of the analysis. This is particularly true with regard to parcels close to special resource areas such as those adjacent to DNM.

Section 2.2 Reasonably Foreseeable Development Scenario– BLM created a Reasonably Foreseeable Development Scenario (RFD) to help identify and quantify direct, indirect, and cumulative effects of oil and gas activity. The EA states that the numbers [in the RFD] are for analysis purposes only and carry with them no guarantees of lease issuance or subsequent development; and BLM assumes that each parcel would have at least one well developed within it. The RFD for each parcel is listed in Appendix D. While Appendix D estimates there would be only 1 well developed per parcel on parcels 69-71, it also indicates that the potential number of wells on those parcels could be much higher. As many as 36 wells could be developed on parcel 69; 3 wells on parcel 70; and 29 wells on parcel 71. That is potentially up to 68 wells developed on just three parcels adjacent to Dinosaur NM. The basis for the low estimate of actual wells per parcel, compared to potential wells, is not well explained or justified in the EA. Presumably, it is because those three parcels are located almost entirely within low density areas for oil and gas; however, BLM does not state as much. Nor

does BLM explain or justify why even one well on each of these parcels is appropriate, given the likelihood of low oil and gas production vs. potentially significant adverse impacts.

Because of the special status of resources within DNM that are protected from impairment under the NPS Organic Act, we believe BLM should provide a better description and explanation of why it chose to offer parcels 69-71 for lease and how many wells may realistically be developed on those parcels 69-71.

Section 2.2.2 Well Drilling and Completion Operations, (sub-section) Hydraulic Fracturing – The EA indicates that since hydraulic fracturing technology (HF) is not [*currently*] used on ALL (*emphasis added*) wells drilled in the VFO, the environmental impacts of HF would not be evaluated in the EA and such analysis would be deferred until the Application for Permit to Drill (APD) stage. This approach fails to disclose how much fracking may be allowed and fails to quantify or analyze the serious potential for the significant adverse environmental impacts that HF is known to cause. We are particularly concerned about the unanalyzed potential for significant water pollution of rivers and streams down gradient of potential well sites in parcels 69-71.

Chapter 3 Affected Environment, Section 3.3 Resources/Issues Brought Forward for Analysis – It is generally accepted that the quality and diversity of natural, cultural, and scenic resources within units of the National Park System directly correlate to the quality of the visitor experience. Millions of people visit parks because they expect to find the nation’s finest examples of pristine landscapes; healthy, intact environments; and well preserved cultural and historic objects. In the case of DNM, the vast majority of the monument’s 300,000+ visitors per year go to the Quarry Visitor Center area during their visit. As a result, any adverse impacts from leasing and development of parcels 69-71 are likely to be observable from the park entry road and/or visitor center area, and will inevitably adversely impact the experience of hundreds of thousands of people.

Given the close proximity of the three lease parcels to the park and the special requirements under the NPS Organic Act for the protection of park resources and values, it would have been appropriate to include a section on “Dinosaur National Monument Resources” as its own issue topic. Other than a sub-section on visual resources at DNM, there is little, if any, evidence in the EA that BLM has actually considered potential impacts to park resources or park visitors, or seriously factored NPS resource concerns into the planning process. The impact topics relevant to DNM that should be included are:

1) Air Quality and Air Quality Related Values –One purpose of the Clean Air Act (CAA) is “to preserve, protect, and enhance the air quality in national parks (42 U.S.C § 7470(2)). DNM is a Class II area. Pristine air quality and nearly limitless views are an integral part of the visitor experience at DNM and are a necessary part of protecting the Monument’s viewsheds and dark night skies. However, ozone pollution and reduced visibility (from “haze”) are well documented and are significant concerns at DNM. In recent years, wintertime ozone levels in the Uinta Basin have exceeded the National Ambient Air Quality Standards (NAAQS), and the area is likely to be designated as “non-attainment” in the future. Air quality studies have demonstrated that oil and gas activities in the Uinta Basin are a primary contributor to these wintertime exceedances.

Extensive oil and gas development can emit significant quantities of air pollutants from construction, well drilling and production operations, and such is the case in the Uinta Basin. Although emissions from an individual well or well pad may appear inconsequential, the cumulative emissions from regional oil and gas operations can significantly harm air quality and Air Quality Related Values (AQRV). Pollutants of concern (both primary and secondary) from oil and gas operations include nitrogen oxides (NOx), particulate matter (PM2.5 and PM10), sulfur dioxide (SO2), volatile organic compounds, ozone (O3), greenhouse gases and hazardous air pollutants. These pollutants can contribute to visibility degradation in DNM, adverse effects to human health which is a concern for park visitors and staff, and adverse ecosystem effects in parks from excess nitrogen and sulfur deposition and ozone impacts to vegetation.

Yet the EA fails to quantify or estimate cumulative impacts from the proposed leasing or explain how increasing oil and gas production in this area is justifiable given the current air quality problems, which leads us to conclude that the analysis is inadequate. Any additional contribution by the proposed oil and gas activities to the deterioration of air quality in DNM, which seems inevitable, is unacceptable.

2) Visual Resources (Viewsheds) – Viewshed impacts are a common concern whenever oil and gas leasing is proposed adjacent to a unit of the National Park System; and the potential for such impacts is a particularly significant concern at DNM. Scenic vistas from high elevation points within the Monument provide dramatic views and a remote and far-reaching landscape that includes montane peaks, high desert plateaus, entrenched canyons carved by the Yampa and Green Rivers, and expansive skies. These unimpaired vistas are fundamental to the visitor experience at DNM.

For proposed leasing located some distance from a park's boundary, the Coalition typically recommends "mitigation" to reduce viewshed impacts, including painting infrastructure to match the surrounding environment and using the topography and landscape to create a visual buffer. In addition, night time activity and lighting should be reduced to the minimal amount necessary. However, when leasing is proposed adjacent to a park's boundary, especially if visible from primary visitor facilities within the park (such as is the case with the Quarry Visitor Center), we recommend "avoidance" as the most effective strategy to prevent impairment of park resources.

In this case, because the proposed lease parcels 69, 70, and 71 would be located immediately adjacent to the monument, surface disturbing activities within the foreground/middleground distance zone as defined by BLM Visual Resource Management system (up to 5 miles) would be significant; however, the potential impacts are neither disclosed nor analyzed. We therefore urge BLM to permanently close parcels 69, 70 and 71 to leasing; or at least defer leasing these parcels until a more thorough planning process (such as an RMP amendment) is undertaken.

For lease parcels 65, 67, and 72, which are located at a distance but still within the viewshed of the Monument, we recommend visual mitigation measures such as use of BLM standard environmental colors and interim reclamation be applied. Any development of these parcels should be REQUIRED to adhere to the design and mitigation standards as defined in Surface Operating Standards and Guidelines for Oil and Gas Exploration and Development – the "Gold Book" developed by the BLM and USFS.

3) Visual Resources (Dark Night Skies) – DNM is one of the darkest places remaining in the United States⁵. Because there is little light pollution there, one can see the stars of the Milky Way with remarkable clarity. Night skies are a vanishing resource and increasing development, even in many rural areas, expands the impact of light pollution. Lighting associated with the implementation of oil and gas leases has the potential to adversely impact the naturally dark skies of DNM. Artificial sky glow (the brightening of the night sky from human caused light scattered in the atmosphere) can greatly detract from the overall darkness of the night sky, which can inhibit people's ability to view celestial objects in the night sky. Artificial sky glow can also impact wildlife habitat, wildlife behavior, and scientific discovery.

The NPS Night Skies Program collected baseline data from DNM in 2009. At that time, the data indicated a calculated Sky Quality Index (SQI) of 96. The SQI is a synthetic index derived from the distribution of sky luminance values (to zenith angle 70°) in the artificial sky mosaic which ranges from 0-100 with 100 being a sky free of artificial sky glow. With a value of 96, DNM is considered to have a sky that retains all of its natural characteristics. DNM regularly hosts night sky programs for visitors and is currently working towards an International Dark Sky Designation.

The Coalition typically recommends the following best management practices (BMPs) to reduce impacts to naturally dark night skies:

⁵<https://www.nps.gov/dino/planyourvisit/stargazing.htm>

- Light only where needed;
- Light only when needed (consider using sensors or timers);
- Shield lights and direct them downwards (full cut-off preferred);
- Select lamps with warmer colors (less blue light);
- Use the minimum amount of light necessary;
- Select the most energy efficient lamps and fixtures; and
- Avoid unnecessary flaring of gas at night. When flaring of gas is required, use a visual screen or enclosed combustion chamber ('combustor') to prevent adverse visual effects on night sky viewing areas at DNM

Such measures would be appropriate for parcels 65, 67, and 72: however, again, we recommend that parcels 69-71 adjacent to DNM not be leased.

4) Natural Soundscapes – While it is unclear, based on the EA, if protection of natural soundscapes is a policy concern of BLM, such protection is clearly a concern of the NPS. NPS *Management Policies 2006*, Section 4.9 Soundscape Management, requires the NPS “to preserve, to the greatest extent possible, the natural soundscapes of parks.” In part because of this policy, DNM is one the quietest places in the country⁶; and it is no coincidence that the Sound of Silence Trail is located not far from the Quarry Visitor Center. Recent acoustical data monitored at the Josie Bassett Morris cabin, a popular destination for visitors at DNM, indicates a residual sound level (L90) of 36 dBA. The median natural ambient sound level (Lnat) was 39 dBA and the median existing sound level (L50) was 43 dBA.

The proposed oil and gas leases could create significant noise from construction, operations, and traffic. Low frequency sounds (those typical of trucks, equipment and machinery) can propagate for large distances with very little atmospheric attenuation and could therefore be audible in otherwise quiet park environments. Furthermore, various studies demonstrate that increases in human-caused noise can negatively affect mating, nesting, predation and other behaviors in a variety of wildlife species. And other studies show noise levels can affect the experience of park visitors and lead to a variety of social, psychological, and physiological changes. However, such impacts to DNM resources are not evaluated in the EA.

5) Water Quality – It is quite surprising that “Water Quality” is not identified as an impact topic in the EA, especially since, as described in EA Section 2.2.2, BLM contemplates allowing an unspecified amount of hydraulic fracking in the lease area(s). It appears to us that BLM has violated NEPA by not disclosing or analyzing obvious and foreseeable potential impacts to water quality that could be caused by the future development of the proposed leases. The potential adverse impacts to water quality in the vicinity of DNM is high given the topography of the parcels, the erodible nature of the soils and rock types, and the proximity of streams and rivers downslope of the sites. For example, the proposed oil and gas activities could cause erosion, run-off, or spills that pose significant adverse impacts to the water quality of Brush Creek and ultimately to the Green River. These potential impacts should be disclosed and fully assessed in an appropriate NEPA analysis.

6) Threatened & Endangered Species – Relative to the above water quality concerns, we are disappointed that BLM did not disclose or analyze potential impacts to threatened or endangered fish species. For example, several parcels appear to be located on or adjacent to Brush Creek, approximately one mile upstream of its confluence with the Green River. Any surface disturbance in these parcels could potentially have effects on water quality in Brush Creek and the Green River. Such effects could potentially have adverse impacts on endangered fish (Colorado pikeminnow, razorback sucker, humpback chub and bonytail). These potential impacts should be disclosed and fully assessed in an appropriate NEPA analysis. Because of the importance of Brush Creek as native fish habitat, the Coalition

⁶<http://www.deseretnews.com/article/865622620/Dinosaur-National-Monument-named-one-of-the-quietest-places-in-the-country.html>

recommends that NSO stipulations be imposed for all proposed lease sites within and up gradient of the Brush Creek drainage.

Chapter 4 Environmental Impacts – This chapter discusses the environmental consequences of implementing the Alternatives described in Chapter 2 in the context of the Affected Environment described in Chapter 3. In general, the complete absence of impact analysis on significant topics such as Water Quality, Endangered Fish, and Socioeconomics is a concern. In addition, BLM’s rather superficial approach to analyzing the impact topics that are carried forward is also a concern. For example, the EA explains that “direct impacts” are caused by an action and occur at the same time and place as the action; while “indirect impacts” are caused by an action but [the impacts] occur later or farther away from the resource. Section 4.2 states that “No direct impacts would occur from the Proposed Action of LEASING (*emphasis added*) but indirect impacts could be expected from potential development of the leases.” Then in subsequent sections of Chapter 4 BLM provides a very simplistic and formulaic impact analysis under each impact topic along the lines of:

Although the leasing of the parcels would not directly impact the [*insert impact topic or resource name*], the issuance of leases does convey an expectation that drilling and development would occur. The potential development of a lease would likely cause indirect impacts to [*insert impact topic or resource name*].

Of course, mere issuance of a piece of paper (a lease) does not by itself cause significant or direct impacts. However, each lease issued empowers some level of future oil and gas development that will inevitably result in a variety of adverse impacts that are not sufficiently described or evaluated in the EA. In effect, BLM has artificially segmented the project into “leasing” and “future implementation of the lease(s).” As a result, the EA analysis is fundamentally inadequate and fails to appropriately address foreseeable impacts and eventual outcomes of the proposed leasing.

More specifically, in the context of the impact topics suggested in our comment about Chapter 3, the EA fails to disclose or analyze the variety of potential adverse impacts of the proposed action and resulting oil and gas operations on the resources and visitor experience opportunities within DNM. When it comes to protecting DNM resources from impairment, it is not sufficient to postpone an effective analysis until after a lease has already been awarded and an Application for Permit to Drill (APD) had been received.

Summary of Concerns – As described in detail above, we have numerous concerns about the adequacy of the EA in disclosing and analyzing the potential impacts of the proposed action on nearby resources and values, particularly in regard to parcels 69-71 and potential impacts to DNM. The EA fails to take the required “hard look” at those impacts. Much of the “analysis” is cursory at best (along the lines that “leasing *itself* will not cause direct impacts but future impacts could occur if the leased parcels are developed”). While other, potentially significant, impacts (such as water quality, endangered fish, or socioeconomics) have not been described or analyzed at all.

We are concerned that BLM proposes to lease numerous parcels (including parcels 69 and 71) within the “intended Vernal MLP area,” when in previous lease sale(s) BLM excluded or deferred action on such parcels until the completion of a more comprehensive planning process. This change from past practice is not adequately explained or justified in the EA. In addition, while the EA makes this reference to the “intended Vernal MLP area,” it provides no information about the status or relevance of that process to future leasing.

Lastly, we are particularly concerned that BLM proposes to lease three parcels (69-71) on or near the DNM boundary despite the fact that these parcels lie within the lowest density area(s) for oil and gas production; and despite the fact that such development would be visible to and impact the experience of hundreds of thousands of monument visitors annually. As former NPS employees, we understand that BLM’s mission and policies differ significantly from those of the NPS. However, in this case BLM is placing the wrong priority on the best

and most economically beneficial use of the parcels on the monument boundary. That use would be to protect the resources and the recreational and scenic qualities of the immediate area.

For all the reasons described above, the Coalition urges BLM to defer action on leasing parcels 69-71 adjacent to DNM. The deferment should be imposed until the completion of a more substantive and inclusive planning process (such as an RMP amendment and EIS). In addition, the potential impacts of leasing and development of parcels 65, 67, and 72 (visible at a distance from DNM) should be carefully minimized and managed through the application of appropriate stipulations and mandatory imposition of best management practices.

In closing, we appreciate the opportunity to comment on this important issue.

Sincerely,

A handwritten signature in black ink that reads "Maureen Finnerty". The signature is written in a cursive, flowing style.

Maureen Finnerty, Chair
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